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ABSTRACT

A comprehensive strategy for allocating New York's resources for combating illiteracy must be adopted. The state's education department must become more active in coordinating literacy education efforts by publishing and circulating a directory of all public, private, and volunteer literacy services currently available. The state education department's existing regional literacy task forces must better monitor and coordinate volunteer efforts and incorporate private sector initiatives. The state should finance a study to determine the long-term effects of state-funded literacy training efforts so that the costs of illiteracy and the benefits of training can be quantified more accurately. The state should improve the type of data available on literacy programs and illiterate adults. The private sector should play a more active role in addressing adult literacy by establishing on-the-job literacy education programs, donating financial resources, recruiting volunteers, offering meeting space, supporting public awareness programs, and participating in regional literacy programs. In order to help expand private sector literacy activity, the public sector should fund research on the effectiveness of various approaches to literacy instruction, disseminate information on the occurrence of literacy throughout the state, and fund literacy programs for target populations likely to be missed by private sector efforts. (The document contains 53 references.) (CML)

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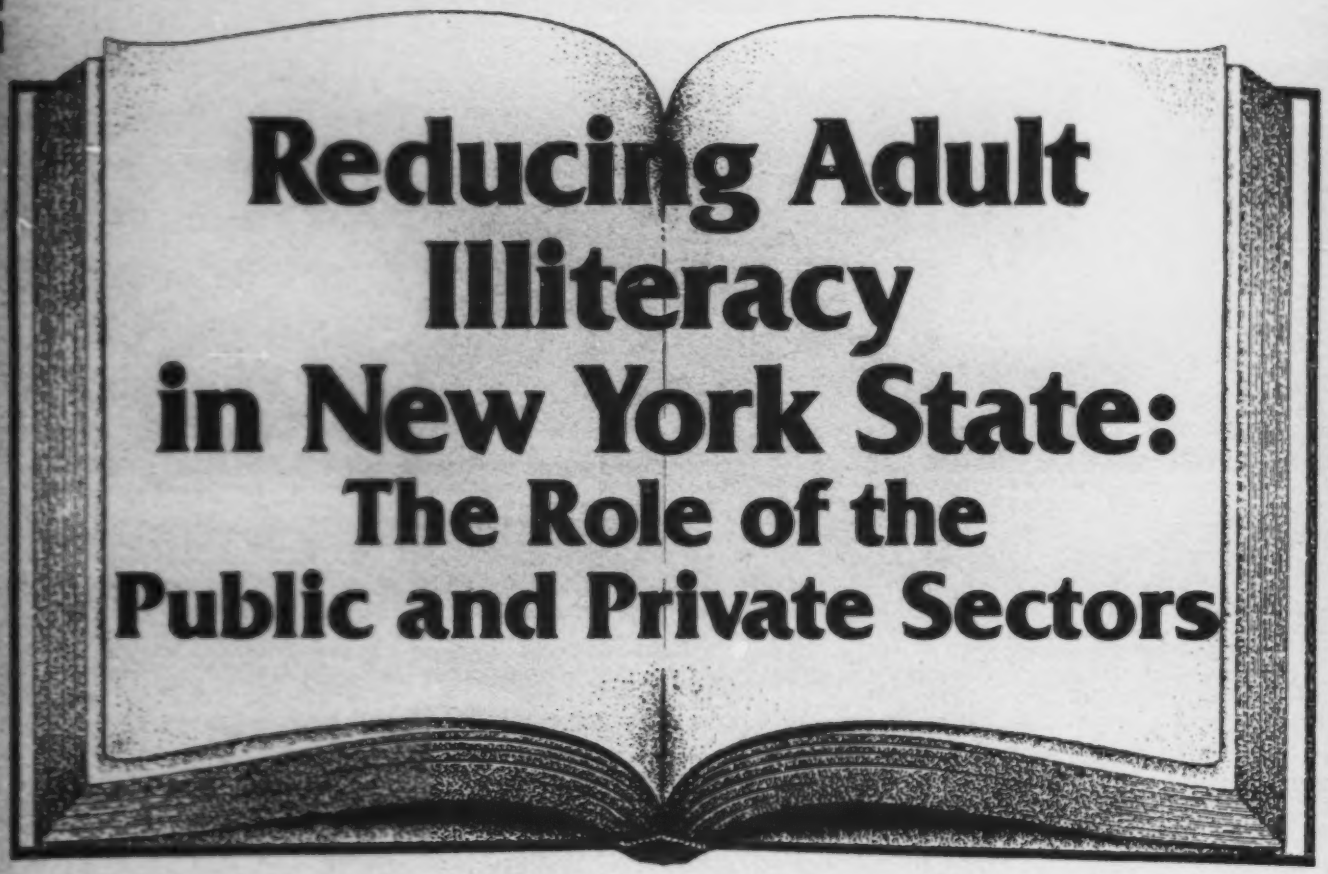

# Reducing Adult Illiteracy in New York State: The Role of the Public and Private Sectors

## Staff Report to

## Senator Roy M. Goodman, Chairman
## Legislative Commission on Public-Private Cooperation

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State of New York
Legislative Commission on Public-Private Cooperation

Senator Roy M. Goodman
Chairman

Legislative Office Building
Albany, N.Y. 12247

# REDUCING ADULT ILLITERACY IN NEW YORK STATE: THE ROLE OF THE PUBLIC AND PRIVATE SECTORS

Staff Report to

Senator Roy M. Goodman, Chairman
Legislative Commission on Public Private Cooperation

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October 1987

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# I. INTRODUCTION

The foundation of any state's efforts to build a strong and growing economy is a skilled workforce. Unfortunately, in New York State -- where the job growth rate continues to lag behind that of neighboring competitor states -- adult illiteracy is widespread.

Currently, according to our estimates, there are over 2.8 million functionally illiterate adults in New York State.(1) These individuals, largely excluded from the productive workforce because of their inability to read and write adequately, comprise over one-fifth of the State's adult population.(2)

Adult illiteracy is a serious concern for several reasons. First, a large population of unskilled workers is a tremendous roadblock to any state's plans for effective economic development. Allowing one-fifth of all adults in New York State to remain functionally illiterate is not an attraction to expanding New York companies and out-of-state firms looking to relocate. Second, reading and writing skills open the door to higher-paying, more technically advanced job opportunities. Third, literacy is essential to enable workers to adapt successfully to changing technology in the workplace. The ability to incorporate technological advances is vital for sustained economic competitiveness.

Recognizing the importance of combatting adult illiteracy, the New York State Senate Committee on Investigations, Taxation and Government Operations, chaired by Senator Roy M. Goodman,

issued a report in April 1984 entitled Adult Illiteracy in New York State -- A Hidden Disgrace. The report indicated the magnitude of the problem of illiteracy in the State and offered several ways that the public sector could begin combatting it. Following the release of the report there was a dramatic increase in public support of literacy education programs.

On April 3, 1987, the New York State Commissioner of Education, Gordon M. Ambach, wrote in a letter to Senator Goodman: "It has been three years since we met in your office on the topic of adult illiteracy. Since that time, the aid program which you and your fellow legislators put in place has had a profound effect upon opportunities in our State for undereducated adults."(3)

Since its statutory mandate includes examining the "availability of a skilled labor force that meets the requirements for present and future economic growth," the Legislative Commission on Public-Private Cooperation recently undertook a several-month study to assess how far we have come and how far we need to go in addressing New York's adult illiteracy problem.

In assessing the State's past and current efforts, only one conclusion can be reached: the State's programs, which have been expanded with the expectation of real progress, have had only a marginal impact on the adult illiteracy problem. Last year, for example, these programs cost the State $33 million and made literate less than one-quarter of one percent of the State's illiterate adult population.(4) Despite the State's continuing

efforts, the Commission projects that the number of functionally illiterate adults in the State will rise from over 2.8 million in 1987 to approximately 3.3 million in 1992 -- a 15 percent increase, over nine times greater than the growth rate of the State's total population. Clearly a new approach is needed.

First, the State should better target its limited resources. In 1986, using the State Education Department's data and definitions, 64 percent of all enrollees in State-financed literacy education programs were not illiterate. The State should change its policy and redirect all available adult literacy education funds to training those individuals who are in fact functionally illiterate.

Second, the State Education Department must become more active in coordinating literacy education efforts across the State. Currently, volunteer, non-profit, public and private organizations institute and run literacy education programs on an ad hoc and uncoordinated basis. The State Education Department does not participate in the regional literacy councils it helped establish, nor does the State encourage the development of more effective tutor training or recruitment procedures.

Third, the private sector must step up its efforts and take the leading role in addressing the problems of adult illiteracy. The private sector, the beneficiaries of a literate workforce, can target training efforts better than can the public sector. Also, the public sector's response to this tremendous problem is constrained by limited State resources.

The private sector can participate in reducing the State's

population of illiterate adults in several ways: providing on-site, on-the-job literacy education programs; donating financial resources; providing meeting space; recruiting volunteer trainers from within its own workforce; supporting public awareness programs; and participating in regional literacy education programs.

Fourth, the public sector can play a vital supportive role by (1) actively coordinating all literacy education efforts across the State; (2) funding ongoing research on the effectiveness of the different approaches to literacy training; (3) disseminating information on public, private, non-profit and volunteer literacy activities to interested parties; (4) providing technical assistance to those interested in launching literacy education projects; and (5) funding literacy programs for target populations, such as welfare recipients and prison inmates that private sector efforts are not likely to reach.

## II. FINDINGS

1. In New York State in 1987, the Commission estimates that there are over 2.8 million adults who can read at no better than the eighth-grade level. These "functionally illiterate" adults equal 20.2 percent of the State's total adult population, a proportion equivalent to the total adult populations of the Buffalo, Rochester, Syracuse and Capital District regions combined. (Section IV)

2. Based on information from the U.S. Department of Education and official projections of the State's population growth, the Commission has concluded that the number of functionally illiterate adults will total 3.3 million by 1992 -- a 15 percent increase over the current illiterate adult population, more than nine times greater than the growth rate of the State's total adult population of 1.6 percent over the same period. This will occur despite the continuation of the State's current efforts. (Section IV)

3. The impact of the State's literacy education programs is restricted by the extremely small percentage of the State's illiterate adult population that is served. Using the New York State Education Department's definition of illiteracy (at or below sixth-grade reading skills), only 1.5 percent of illiterate adults are reached by State-financed literacy programs. Using the Commission's more rigorous definitions of illiteracy (at or

below eighth-grade reading skills) and more appropriate estimates of the illiterate adult population, only 1.7 percent of illiterate adults are served. (Section V)

4. The State's efforts are even less successful if one examines the number of illiterate adults who become literate through State-funded education programs. In 1986, fewer than one-fifth of the total number of enrollees in these programs -- one-quarter of one percent of the total adult illiterate population in the State -- became literate through State training. (Section V)

5. A significant portion of the State Education Department's limited adult literacy education resources are being spent on adults who are not truly illiterate. Using the State Education Department's own definitions, 64 percent of all enrollees in literacy education programs in 1986 were not illiterate. Using the Commission's definition of illiteracy, 27 percent of all enrollees in State-funded programs were not illiterate. (Section V)

6. It would be futile to rely solely upon increases in State appropriations to combat illiteracy. At estimated current costs, New York would need a massive $1.4 billion increase in appropriations to enroll all illiterate adults in State-funded programs. Even then, however, illiterate adults who graduate State-financed training programs as literate members of society

comprise only 10.9 percent of all enrollees. (Section V)

7. New York State's private sector is already involved to some extent in efforts to combat adult illiteracy. Current activities include: on-the-job literacy education programs; donation of financial resources; provision of meeting space; recruitment of volunteer trainers from within the businesses' own workforce; and support of public awareness programs. (Section VI)

8. The State Education Department does not coordinate literacy training efforts in the State. Volunteer, non-profit, public and private efforts institute and run State-funded literacy education programs without any formal guidelines or direction from the State. The Department does not participate in the regional literacy councils it helped establish, nor does the State encourage the development of more effective training procedures for tutors or methods to recruit students. (Section VI)

9. The State does not undertake sufficient research on the problems of adult illiteracy to (1) determine the incidence of illiteracy across New York State and accurately define specific affected populations; (2) offer necessary technical assistance to local training centers; or (3) provide guidelines for effective administration of State-funded programs. Without this research, the State's ability to educate functionally illiterate adults is

severely hindered. (Section V)

10. The State Education Department does not disseminate information on suggested composition and priorities of literacy education programs to private sector organizations. Such information must be provided, and program administrators must use it, to ensure the success of adult literacy efforts. (Section VII)

## III. RECOMMENDATIONS

1. A comprehensive strategy for allocating the State's limited resources must be adopted. The State should use all available adult literacy funds to train on a first priority basis those individuals who are in fact functionally illiterate. The State Education Department also should adopt guidelines allowing funding of only those literacy training programs that meet certain broad criteria for effective instructional methods.

2. The State Education Department must become more active in coordinating literacy education efforts across the State by publishing a directory of all public, private and volunteer literacy services currently available, and circulating it to all relevant public and private institutions.

3. The State Education Department's existing regional literacy task forces must be made more effective through better monitoring and coordination of volunteer efforts and the incorporation of private sector initiatives into the task forces' activities. The management of these task forces should consist largely of representatives from businesses and volunteer literacy organizations in the region. The State Education Department should assume an active, coordinating role in organizing regional literacy efforts.

4. The State should finance a study to determine the long-term effects of State-funded literacy training efforts. The employment and economic success or failure of literacy trainees should be documented to quantify more accurately the costs of illiteracy and benefits of training.

5. The State should improve the type of data available on literacy programs and illiterate adults in New York State. More accurate data will assist in a more coordinated and effective targeting of literacy services across the State.

6. The private sector must play a more active role in addressing adult illiteracy. The private sector -- the beneficiaries of a literate population -- can participate in reducing the State's population of illiterate adults in several ways:

-- establishing on-site, on-the-job literacy education programs;

-- donation of financial resources;

-- offers of meeting space;

-- recruiting volunteer trainers from within its own workforce;

-- support of public awareness programs; and

-- participation in regional literacy education programs.

7. The public sector should play a supportive role in the expansion of private sector literacy activity. In addition to coordinating all literacy efforts in the State, the State Education Department should:

-- fund research on the effectiveness of various approaches of literacy instruction;

-- disseminate information on the the occurence of literacy throughout the State; and

-- fund literacy programs for target populations, such as welfare recipients, prison inmates and other groups that are not likely reached by private sector activities.

## IV. DEFINING ILLITERACY

Estimates of the nation's illiterate adult population vary from 20 million to 85 million.(5) For New York State, estimates range from 2 million to over 4.2 million.(6) The tremendous discrepancies in numbers are, in large part, due to basic differences in the definitions of "illiteracy" use to calculate each estimate.

### DEFINITIONS OF ILLITERACY

There are two primary concepts of literacy used today: conventional literacy and functional literacy.

#### Conventional Literacy

Conventional literacy is the term used to describe the "traditional" requirements for reading and writing. These requirements generally encompass only the ability to sign one's name and to comprehend a few simple words or phrases.(7) Carman St. John Hunter and David Harman of World Education, a leading organization in the fight to improve literacy worldwide, define conventional literacy as: "The ability to read, write, and comprehend texts on familiar subjects and to understand whatever signs, labels, instructions, and directions are necessary to get along with one's environment."(8)

A recommendation to the United Nations Educational, Scientific and Cultural Organization's (UNESCO) Tenth General Conference states more simply that any person should be

considered to be illiterate who is "unable to read, write, and understand a short, simple statement of facts relating to his daily life."(9)

Functional Literacy

True literacy, however, in constrast to basic reading and writing ability, implies the skill to perform tasks and activities that have some value to society. Literacy, therefore, has come to be defined by the more demanding standard of functional competency.

Dr. Norvell Northcutt of the University of Texas outlined a strategy for determining socially necessary literacy skills and for quantifing the functionally illiterate adult population. Northcutt's Adult Performance Level (APL) project entwines four skill areas (communication, computation, problem solving and interpersonal relationships) and five general knowledge areas (occupational, consumer economics, community resources, government and law, and health).(10) Tasks in each category were assigned to a sample population to determine functional competence. A matrix illustrating the APL functional assessment categories is presented in Table I.

Using national samples, the APL study determined that approximately 20 percent of the nation's adult population was functionally illiterate in 1977. Following Northcutt's dramatic revelations, education experts began revising their own definitions of illiteracy.

APL MODEL OF FUNCTIONAL COMPETENCY: EXAMPLES OF TASKS

TABLE I

| Basic Skills: | General Knowledge and Content Areas: Consumer Economics | Occupational Knowledge | Health | Community Resources | Government and Law |
|---|---|---|---|---|---|
| Reading | read an ad for a sale | read a job description | read first aid directions | read a movie schedule | read about your rights after arrest |
| Writing | fill in income tax form | complete a job application | write a menu | complete an application for community service | write your congressman |
| Speaking, Listening, Viewing | ask question of IRS | listen to an employer talk about a job | listen to a doctor's directions | use the telephone | describe an accident |
| Problem-Solving | decide which house to rent | decide which job suits you | decide when to call a doctor | use stamp machines in the post office | decide which candidate to vote for |
| Inter-personal relations | relate to a sales clerk | be successful in a job interview | interact with hospital personnel | ask directions | interact with police successfully |
| Computation | compute sales tax | calculate paycheck deductions | decide how many times a day to take a pill | calculate the time it takes to travel a distance | calculate the cost of a speeding ticket |

In 1978, UNESCO offered the following revised definition of illiteracy: "A person should be considered 'functionally illiterate' who cannot engage in all those activities in which literacy is required for effective functioning of his group and community, and also for enabling him to continue to use reading, writing and calculation for his own and the community's development."(11)

"Functional literacy" connotes reading for a purpose -- emphasizing the fact that certain tasks are required of adults in their communities. The United States Department of Education has defined a functionally literate person as:

> . . .one who has acquired the essential knowledge and skills in reading, writing and computation required for effective functioning in society, and whose attainment in such skills makes it possible for him to develop new aptitudes and to participate actively in the life of his times.(12)

To stress the importance of literacy as a preceondition for functioning in society, the U.S. Department of Education suggests that adults should be able to perform the following tasks:

-- Read and understand all sections of a newspaper, with particular emphasis on the classified and advertisement sections;

-- Read a driver's license test;

-- Read and understand voter registration instructions;

-- Read and comprehend the key features of popular business contracts such as those issued by car dealers, furniture stores, clothing shops and auto repair shops;

-- Read labels on such household items as groceries, medicines, recipes and machine instructions;

-- Read the materials necessary to perform jobs classified as entry level;

-- Read personal letters and bills;

-- Read and follow public instructions such as road and building signs;

-- Read and use a telephone directory;

-- Read and complete job application forms; and

-- Read and comprehend business letters from debtors and creditors.(13)

Summarizing the various precise definitions, Karl Haigler, Director of the Adult Literacy Initiative at the U.S. Department of Education, said in testimony before the United States Congress that the current working definition of functional literacy is: "the attainment of the knowledge and skills, including reading, writing, speaking, listening, computation and problem-solving normally associated with the ability to function at least at an 8th-grade level in adult situations."(14)

## HOW SHOULD FUNCTIONAL LITERACY BE MEASURED?

Often, the inaccessibility of good data forces researchers to use unsatisfactory measurements of functional illiteracy. The Maryland Department of Education, according to testimony before the U.S. House of Representatives Subcommittee on Postsecondary Education, is one of many institutions that uses the acquisition of a high school diploma as evidence of functional literacy.(15) The New York State Education Department bases estimates of functionally illiterate adults on the percentage of high school drop-outs that cannot read above the sixth-grade level.(16) The

United States Bureau of the Census, which does not distinguish between functional and conventional illiteracy, even once proclaimed that over 99 percent of the population was literate, basing its estimates on written responses received to a printed survey!(17)

Different definitions of functional illiteracy may be employed in any given study. For the most part, however, completion of secondary school has become a benchmark definition of functional literacy. Adults without high school diplomas are considered disadvantaged, and thus form the target population for almost all public adult education activities. This view inherently assumes that those with fewer than 12 years of schooling are less able than high school graduates to attain and sustain employment and, in general, to participate fully in adult life.

Completion of high school, however, is not a reliable indicator of functional literacy. Many persons who have not completed high school, or even grade school, are in fact "functioning in ways that bring them personal satisfaction and contribute to their families' and society's well-being."(18) And conversely, many people who <u>have</u> graduated high school do not possess sufficient skills to be labeled functionally literate.(19)

What is truly important is the actual functional level of any given individual. Thus, researchers should focus not on one's <u>schooling</u> level but on one's <u>performance</u> level.

Jonathan Kozol, author of <u>Illiterate America</u>, firmly focuses

definitions of illiteracy on the need for functional competence, and offers the following explanation:

> I have proposed the following minimal estimates...: 25 million reading either not at all or at less than the fifth grade level; 35 million additional persons reading at less than the ninth grade level. Note that, in both cases, I am speaking of performance, not of years of school attendance.
>
> It requires ninth grade competence to understand the antidote instructions of a bottle of corrosive kitchen lye, tenth grade competence to understand instructions on a federal income tax return, twelfth grade competence to read a life insurance form. Employment qualifications for all but a handful of domestic jobs begin at the ninth grade level.(20)

Many experts now concur with the attempts to define and calculate not only conventional illiteracy but the larger, more accurate representation of societal demands for functionally competent adults.(21) Measurement of functional literacy is more difficult than measurement of conventional competence: determining whether someone <u>can</u> read or write is simpler than determining who can read and write <u>adequately</u>.

Although Kozol has been labeled an extremist by some and an alarmist by others(22), his use of the ninth-grade level (more precisely, mastery of the eighth-grade level) as proof of functional literacy has since been accepted by several experts in the field of adult illiteracy.(23)

## <u>SED'S DEFINITION OF ILLITERACY</u>

The New York State Education Department (SED) claims that only those reading at or below the sixth-grade level are justly classified as "illiterate." However, operating under the

assumption that all people without high school diplomas are in need of continued educational training, SED allows any person reading above the sixth-grade level, but still without a high school diploma, is allowed to enroll in literacy education classes. Individuals with high school diplomas are not admitted.(24)

Relying on this premise, and assuming further that enrollees in State-financed literacy education programs are statistically representative of the entire illiterate adult population in New York, the SED has created a mechanism to estimate the number of illiterate adults in the State.

The SED compiles information provided by local literacy organizations on the reading ability of adult enrollees. The number of adults reading at or below the sixth-grade level is then used as a proportional measure applicable to the entire population of illiterate adults, which the Department defines as those people who do not have a high school diploma.

SED's approach is seriously flawed. First, estimates of the total illiterate population based on these numbers may be wrong, since the enrollees in literacy programs are not representative of New York's illiterate population.(25) Second, the Education Department chooses to use a sixth-grade reading level as the boundary of literacy, rather than the more justified ninth-grade level. Third, the State Education Department limits its view of illiterate adults to a proportion of those individuals lacking a high school diploma. This relies on the flawed assumption that illiteracy (i.e., inadequate reading and writing performance)

does not occur among New York State's high school graduates.(26)

DEFINITIONS USED IN THIS REPORT

Based on its flawed methodology, the State Education Department estimates the total New York State illiterate adult population to be 2,050,000. This figure, however, first should be supplemented by an amount sufficient to adjust the "literacy line" from SED's sixth-grade reading level to mastery of eighth-grade reading and writing skills. Second, a calculation of those individuals who graduated from high school but did not achieve functional literacy must be included in any estimate of the total illiterate adult population.(27) The resulting adjusted total of 2,846,000 represents a more accurate estimate of New York State's functionally illiterate adult population.

New York State's conventionally illiterate population (fifth-grade reading level or below) is approximately 1.7 million and its functionally illiterate population (eighth-grade reading level or below), exclusive of the conventionally illiterate adults, is an estimated additional 1.1 million.(28) These 2.8 million adults represent an alarming 20.2 percent -- more than one-fifth -- of the State's adult population, greater than the entire adult populations of the Buffalo, Rochester, Syracuse and Capital District regions combined(29).

Using information supplied by the United States Department of Education, the New York State Department of Commerce, and the United States Bureau of the Census, the Commission further estimates that the number of functionally illiterate adults will

grow to approximately 3.3 million within five years if left unchecked.(30) This figure assumes continuation of New York's adult literacy programs at their present level of success.

In this report, the ninth-grade reading level has been presented as a justifiable measure of functional literacy for 1987. However, with the current and future development of science and technology in both the State and the nation, the level of literacy required to cope with the demands of social and economic life is rapidly rising. Thus, the measure of "functional literacy," as defined, is continuously increasing. Simply put, as the standards for functional competency increase with the everchanging economy, so too will the number of functionally illiterate adults.(31) Consequently, if anything, the above projections may understate future illiteracy levels.

## V. PUBLIC SECTOR EFFORTS

On March 26, 1984, New York State Senator Roy M. Goodman released a report by the Senate Committee on Investigations, Taxation and Government Operations entitled Adult Illiteracy in New York State -- A Hidden Disgrace. In an accompanying statement Senator Goodman said, "It is clear that New York State has a great financial interest -- apart from a deep moral obligation -- in the fight against adult illiteracy. Millions of taxpayer dollars are spent to support illiterates who are unemployed, on the welfare rolls, or in prison. Huge sums are also lost each year by businesses as a result of illiteracy among their employees."(32)

On March 31, 1984, the State Legislature adopted an education budget that included two new programs targeted at reducing the number of illiterate adults, with appropriations for the new initiatives totalling approximately $20.3 million.(33)

The two new programs -- Employment Preparation Education, and Equivalent Attendance -- supplemented a third program in existence since 1963 (the Welfare Education Program). Together, these programs graduated approximately 7,200 literate enrollees last year.(34) (The Welfare Education Program (WEP) was begun in 1963 as a joint venture between the State and the federal government. Since 1984, however, WEP has been solely State supported.)

These three literacy programs cost the State $33.0 million in 1986, and appropriations for the 1987-88 school year total

$38.5 million.

NEW YORK STATE EDUCATION DEPARTMENT PROGRAMS

Employment Preparation Education

The Employment Preparation Education Program (EPE) represents the largest commitment of State funds to any literacy effort. Appropriations for the program have increased from $10.3 million in its first year of operation (July 1984 - June 1985) to $17 million today (July 1987 - June 1988).

EPE provides grants to local school districts or Board of Cooperative Education Services (BOCES) schools to compensate those units for their dedication of manhours used to train illiterate adults to read and write. Grants are allocated through a modified version of the regular school aid formula based on the relative wealth of individual school districts, and are used to train people 21 years old or older who do not have high school diplomas and who are in need of training in reading and writing (English as a Second Language, Basic Education, High School Equivalency, etc.)

Equivalent Attendance

Equivalent Attendance (EA), is similar to EPE in that program funds are allocated to local school districts or BOCES. However, this program targets basic education to individuals between 16 and 21 years of age who did not finish high school, and pro rates reimbursement (which is also based on the relative wealth of the school district) to account for the part-time

enrollment of EA students who are already employed.

Appropriations for EA have grown from approximately $10 million when the program was created in 1984 (funding operations from July 1984 through June 1985) to an estimated $13.5 million today (for July 1987 - June 1988).

Welfare Education Program

As its name implies, the Welfare Education Program (WEP) provides literacy training programs to public assistance recipients. When the State assumed full responsibility for the program from the federal government in 1984, the New York State Education Department and the Department of Social Services (DSS) initiated a plan of action based upon a "purchase agreement." The agreement allows DSS to refer to the Education Department any individual it feels is in need of literacy training. After having been trained through one of the measures at the Education Department's disposal, the individual is refered back to DSS to be placed in a job through the Department's employment opportunity programs.

For the July 1987-June 1988 period, WEP will recieve $8 million in State support, with $1 million of that total earmarked to go directly to not-for-profit organizations involved in literacy training.

However, since 1984 DSS has made little progress in allocating the full amount of WEP money. Only a few comprehensive programs have been established, and the SED has not established a working referral system with DSS.

Federal Adult Basic Education Program

New York State receives approximately $7.1 million in federal funds for literacy training activities through the Adult Education Act's Adult Basic Education (ABE) program. This money is distributed widely, funding local education agencies, community based foundations, volunteer organizations, colleges, libraries, and other entities.

ABE claims to serve approximately two million illiterate adults nationwide each year. However, a recent article in the Comparative Education Review asserts that ABE "has a dropout rate from its programs of four in 10 and waiting lists of hundreds of thousands." The article continues: "It is significant to note that adults who tend to seek this type of instruction are already highly motivated and nearly 'functional.' The most deprived are never reached."(35)

Seemingly, New York State's literacy education programs are following the same pothole-filled path taken by the federal government.

DEPARTMENT OF CORRECTIONS EFFORTS

The New York State Department of Corrections (DOC) offers literacy education programs to inmates who read below the fifth-grade level. Of the approximately 50 correctional facilities in the State, 37 offer full-time education programs.

The primary literacy services are the Adult Basic Education Program, the Bilingual Program and the Volunteer Tutoring

Program. The ABE Program offers classroom instruction that consists of competency-based instruction. The Bilinguial Program offers English-as-a-Second Language and Spanish literacy training. Finally, the Volunteer Tutoring Program offers training to inmates and community volunteers that want to train illiterate inmates to read on a one-to-one basis.

Total annual costs for DOC's educational programs are approximately $5 million, employing 188 teachers and supervisors who train over 4350 inmates annually. No information on reading levels, performance measures, or literacy acheivement was available from DOC.

## THE STATE'S RESPONSE TO PROJECT LITERACY U.S.

In January 1986, the American Broadcasting Corporation (ABC) and the Public Broadcasting System (PBS) initiated a joint venture designed to alert the American population to the growing threats of adult illiteracy (see Section VI for further detail). The venture, Project Literacy U.S. (PLUS) encouraged leaders in business, labor, education, government and religion to create or expand task forces, introduce literacy hotlines, and provide the facilities and personnel that an increased demand for literacy services would require.

New York State responded with the "New York -- You Can Read" program, through which the State Education Department created nine task forces across the State as an attempt to coordinate and "regionalize" literacy services. The boundaries of these task forces are drawn in conjunction with nine of the PBS affiliates'

designated regions.

Although representatives from private companies and volunteer organizations were encouraged to participate in the regional councils, SED has not directed the organization, structure or curriculum of the councils in any coordinated fashion. The State's objective in setting up the councils was to coordinate regional literacy education services, but the SED does not even participate in council meetings and requires no reporting to the State of any kind.(36)

Participation in council activities by volunteer literacy organizations and libraries has been relatively strong, but corporate participation has been minimal, at best. And yet, discussions at these meetings reportedly consist of little more than sharing of information and organization of joint activities.(37)

To its credit, the SED established a literacy hotline to allow more timely and accurate responses to callers' needs than would occur through PLUS's national hotline.

Unfortunately, as has been illustrated, the much needed coordination of literacy education efforts is floundering. It is not apparent that an organized approach to literacy training efforts has been fostered, nor has a future "plan of action" been developed using the regional task forces as focal points of community outreach.

## NEW YORK CITY EFFORTS

New York City launched its own four-year literacy education

effort in 1984 by dedicating $35 million of interest from Municipal Assistance Corporation (MAC) bonds to adult literacy training and to teaching English-as-a-Second-Language courses. These funds support a variety of activities, ranging from support of community-based and volunteer literacy education efforts to financing some of the operations of the Literacy Assistance Center, New York City's coordinating organization.

Also, the State has joined New York City in a cooperative literacy education effort. "Project Prepare" was initiated in October 1986 with the assistance of the New York State Education Department, the Department of Social Services, and the New York City Board of Education. "Project Prepare" educates AFDC recipients in New York City, and is financed through a $550,000 WPE grant. The program is designed as a "case-management" system, providing one-on-one training and guidance, to ensure that each individual's major need is met.

This program was scheduled to terminate in June 1987, but has been renewed with an $800,000 EPE grant to finance operations until June 1988. The program serves an estimated 360 people each year.(38)

FINANCIAL IMPACT

Adult illiteracy affects the State financially in two ways: (1) illiterate adults are often maintained on public assistance rolls; and (2) the State cannot collect income taxes from people who are excluded from the labor force because of illiteracy. Although State figures on public assistance costs of illiteracy

are presently unavailable, a description of the national costs will illustrate the magnitude of the problem. Literacy Volunteers of America -- the second-largest volunteer literacy organization in the nation and the largest volunteer effort in New York State -- estimates that the yearly national cost in welfare programs and unemployment compensation is $6 billion, and that an additional $237 billion each year in unrealized earnings is forfeited by adults who lack basic literary skills.(39)

The State Education Department's Flawed Calculations

The New York State Education Department (SED) has repeatedly claimed that State-funded literacy training programs are financially beneficial to the State.(40) Citing savings in public assistance removals and new tax collections from trainees obtaining jobs, the SED presents a net financial gain to the State of nearly $5 million for 1985.(41) Although SED has not completed estimates for 1986, similar results are expected.

These figures, however, are based on inappropriate assumptions and inaccurate calculations. The final picture painted by the SED is rosy; the true portrait of the State's financial benefits from literacy education spending is less appealing.

First, the SED solely relies on statistical information provided by local literacy training organizations. According to the SED, each organization employs whatever data collection policies it feels is appropriate, ranging from simple entry-exit questionnaires to long-term tracking of enrollees. SED plays no

role in requiring a consistent method of data collection that would produce valid results. The result of this flawed system of data collection is revealed by the two categories of benefits the SED chooses to use to offset State costs.

SED counts any individual who was receiving public assistance at the time of enrollment and is not receiving it at the time of "graduation" from State-financed programs as a savings due to literacy training. However, no attempt is made to demonstrate a causal relationship between literacy education and dependence upon public assistance. For example, the leading cause of removal from public assistance is an increase in family income resulting from marriage. No control for literacy trainees who get married is included in SED's calculations, however.

Further, the SED relies on the same type of "snapshot" data for the employment status of enrollees in State-funded literacy education programs. While obtaining employment is likely related to an individual's use of his literacy education, SED requires no measure of the employment <u>stability</u> of newly literate individuals. Under SED's methodology, an unemployed individual can enter a literacy training program, obtain a job upon "graduation," be fired one week later, and still be counted as a new, full-year contributor to State income tax collections through maintained employment.

Second, while the SED reasonably assumes that newly-literate workers will obtain largely minimum-wage jobs ($7,000 per year), the Department applies the erroneously high tax rate of 18 percent to determine 1985 State tax collections. The top rate

for personal income taxes in New York State for 1985 was 13.5 percent, applicable only to those wage-earners in the highest income bracket (those earning over $25,000). For an individual earning $7,000, however, the 1985 tax rate was only 5 percent. When standard deductions are taken into account -- as they should be -- income tax collections from the new minimum wage earners becomes minimal.

The New York State Tax Reform and Reducation Act of 1987 reduces these income tax collections even further for the current year, in part because of the phase-in of a dramatically higher standard deduction.

Because of the substantial differences between SED's definition of literacy and the definitions used in this report, and because of the errors in calculation and methodology noted above, financial benefits to the State of literacy training have been recalculated by the Commission.

However, because of SED's failure to maintain appropriate data, some assumptions must be made in this recalculation. First, estimates of public assistance removals are based on SED estimates. Second, it is assumed that all individuals making the transition from illiteracy to literacy will obtain full-time minimum-wage employment. It should be noted that these assumptions, which are questionable for the reasons stated above, will lead only to an <u>overstated</u> estimate of the financial benefits to the State.

As illustrated in Table II, even these possibly overstated benefits inherently incorporated into the recalculation of

TABLE II

FINANCIAL BENEFITS OF LITERACY TRAINING IN NEW YORK STATE

| | 1985 | 1986 | 1987 |
|---|---|---|---|
| 1.Illiterate Enrollees | 47,352 | 48,173 | 49,008 |
| 2.Literate Graduates | 4,405 | 7,208 | 7,333 |
| 3.Pub.Assistance Removals | 2,537 | 2,900 | 3,300 |
| 4.Pub.Assistance Savings | $17,198,323 | $19,659,100 | $22,709,650 |
| 5.New Employee Tax Revenue | $537,410 | $836,128 | $476,675 |
| STATE INCOME SUBTOTAL: | $17,735,733 | $20,495,228 | $23,186,325 |
| 6.Additional Tax Collections From Improved Literacy | $40,512 | $32,384 | $28,826 |
| STATE INCOME TOTAL: | $17,776,245 | $20,527,612 | $23,215,153 |
| TOTAL STATE APPROP.S: | $24,300,000 | $33,000,000 | $38,500,000 |
| ONE YEAR NET GAIN (LOSS): | ($6,523,755) | ($12,472,388) | ($15,284,847) |

NOTE: Figures for 1986 and 1987 are estimated. Enrollees, graduates, and appropriations are calculated on a school fiscal year (July-June). Tax collections are based on calendar years.

1. Individuals enrolled in State-financed programs with reading skills from 0 - 8th grade levels.
2. Individuals completing State-financed programs with mastery of 8th-grade level reading skills.
3. Base estimates supplied by New York State Education Department.
4. Based on $6779 average annual public assistance compensation (State Education Department estimate).
5. Assuming all literate graduates obtain employment with an average income of $7000 (minimum wage). Applicable deductions and exemptions are made on total income, and appropriate yearly tax rates are applied.
6. Based on $200 average salary increase for 2,352 employees in 1985, 2,024 in 1986, and 2,059 in 1987. Base estimates supplied by the New York State Education Department.

benefits do not come close to offsetting the State's cost of literacy education programs. In 1987, it is estimated that there will be a net financial loss of $15.3 million attributable to State-financed adult literacy programs.

In 1986, over 7,200 illiterate adults completed State-sponsored literacy education courses (Employment Preparation Education, Equivalency Attendance, and Welfare Education Program, described in further detail in Section VII) achieving literacy, as defined by the Commission. These individuals, now able to obtain employment, are estimated to have contributed over $836,000 in tax revenue to the State in 1986.

Because an estimated $19.7 million was spent through unemployment and other welfare programs to support these same individuals, the State saved this amount by training them to enter the productive workforce. Combined with the new tax revenue generated, savings to the State captured by running the literacy programs reportedly totaled approximately $20.5 million for last year alone. The State-financed programs also strengthened the reading ability of other adults who were lacking proficient reading skills. Increased reading proficiency, the SED maintains, allows individuals to obtain pay increases through increased productivity, ability to escalate in responsibility, or the like. Tax revenue generated from those pay increases are estimated to total approximately $32,400 in 1986.

The total cost of the State's literacy programs were $33.0 million in 1986, incurring a net cost to the State of $12.5 million. Put simply, the benefits of State-funded literacy

programs, although potentially significant in the long term, are much smaller than the SED publicly claims.

These numbers address only the successes so far. Because the State-run literacy programs reach only 1.7 percent of the total population of illiterate adults and only one-quarter of one percent are made literate each year, approximately 2,839,000 people remain illiterate and, of these, 2,798,000 receive no form of literacy assistance education each year from State programs. At current estimated costs (approximately $500 per enrollee), the State would need to appropriate $1.4 billion more than it did in 1986 to enroll all illiterate adults in State-financed programs. Even when all illiterate adults are enrolled in training programs, however, current data suggest that each year only 10.9 percent of all enrollees will be illiterate adults who eventually graduate with the ability to read and write. Because of these extreme costs and the limited overall impact on the illiterate population, future focus for literacy training efforts should be on the private sector.

## VI. PRIVATE SECTOR EFFORTS

The everchanging industrial market, especially the rapid introduction of high-technology advances into the workplace, puts a demand for literacy on workers that never before has been experienced. Technological changes in businesses are most often implemented through distribution of printed information to its workforce. Pamphlets, manuals, and new rules and regulations all become required reading for any employee affected by these changes. Indeed, corporations can retrain only those people who can participate in training programs. Those who cannot read the training manuals may find no work at all.

The following two cases provide typical examples of problems New York businesses will continue to face if adult illiteracy is not quickly addressed:

> (1) In 1984 General Motors instituted technological reforms in its Rochester Products facility, which is located just outside of Rochester, New York. The high-technology innovations were designed to mimic some of the measures used by Japanese producers to increase efficiency, productivity, and proficiency.
>
> There was only one problem. When General Motors began its new training sessions, the corporation discovered that 1,600 of its 4,000 employees lacked the basic reading and writing skills necessary to implement the new process.(42)
>
> (2) Soon the Ford Motor Company will institute an intricate, statistical system of quality control in its plant operations. The system is designed to pinpoint and correct defects in Ford's manufacturing processes. Only simple mathematics -- fractions, decimals, division, etc. -- will be required, along with a small amount of formal writing.
>
> Much to the company's surprise, many employees at Ford, like those at the Rochester Products plant, could not

> articulate numbers nor write adequately to assure effective implementation of the new "Statistical Process Control System."(43)

Some corporations, however, are beginning to recognize the problem of prevalent adult illiteracy in today's labor market. Newer companies are taking active measures to avoid the "surprise" occurence of illiteracy that confronted General Motors and Ford:

> In preparation for its assembly line opening up this fall, the [Mazda Corporation] is sifting through more than 96,000 applicants to fill 3,100 hourly positions, using what it says is the most complex hiring process in the United States or Canada.
>
> Applicants are given a two-hour written test in reading, writing and math. They are interviewed at length, asked to undergo a medical exam and given a two-step "assessment." Before they complete the process, successful applicants may have been in the pipeline for two months and will have spent up to six hours being observed in a discussion group and another six hours at a simulated team assignment, assembling an automobile part, for example.
>
> The company, which every week tests 600 applicants and interviews and assesses more than 100, has been "a little disappointed" at the number of applicants who lack the basic math and language skills...(44)

For older corporations with well-established employees, and for corporations less able to conduct a comprehensive nationwide search and testing procedure as did Mazda, the particular problem of educating the current labor force must be addressed. New innovations are implemented every day in today's corporations in an effort to "keep up" with other firms and remain competitive. If a corporation is not able to swiftly adapt to these changes and allow effective implementation of technology, the corporation

will surely fail. And with the corporation's downfall, so go its employees, whether literate or not.

Marsha Levine, editor of The Private Sector in the Public School, succinctly summarizes the need for private companies to address the problem of adult illiteracy:

> First, global competition will increasingly require American industry to work smarter, faster, and more efficiently. To do this, employees need to be able to adapt to technological change in the workplace.
>
> Second, a shift in our economic base from smokestack industry to information-based, high-technology industry has created an increasing demand for better-educated workers.(45)

## EFFORTS UNDERWAY

In recent years, the private sector has begun to show an avid interest in educating illiterate adults. The reasons vary substantially, but each effort unquestionably results in a direct benefit to the particular corporation putting forth such effort.

### In-House Literacy Training

General Motors and Ford responded quickly to the evident problems with intense, in-house literacy education programs. In 1984 General Motors and Ford entered into agreements with the United Auto Workers (UAW) labor union to provide basic literacy education for company employees. At Rochester Products -- the General Motors Plant -- the Corporation, the UAW, and the Rochester and Greece public schools teamed up and offered basic education to the plant's 1,600 needy workers. Over 800 enrolled in the program.

Ford dedicated nearly $200,000 to provide immediate basic training to over 200 employees through the UAW agreement. By 1985, Ford had basic reading courses operating at 25 plants, with 3,400 students enrolled in the programs.

Under the UAW contract, at General Motors over $200 million per year is available for basic education and a minimum of $120 million over three years is available at Ford.(46)

Another private sector program, operating in New York City, has gained increasing attention. Seven New York City unions formed a consortium, known as the Workplace Literacy Project, to administer specific literacy curricula to over 3,000 union workers and their families.(47) Union members are given basic literacy training that is tailored to meet the workers' specific on-the-job reading and writing requirements.

The New York City school system provides instructors for the consortium. The consortium also receives a separate $2 million appropriation through the State Education Department in addition to a small amount of funds from the City's Municipal Assistance Corporation to customize curricula for the occupations involved and to administer the program.

Financial Grants

Several New York companies provide cash grants to community-based literacy organizations. These funds are used to supplement the organizations' operating budgets, allowing expansion of staff, meeting space and educational materials. A few examples are provided below.

In 1986, the Western Foundation (of the Gulf and Western Corporation) reviewed 130 proposals for community-based education efforts. Of the 130 applicants, four programs were selected to receive a total of $500,000 in funding from the Western Foundation. Two of these programs were in Chicago: one in the Cook County jail and the other in the Austin Community Center on the North Side. Both programs reportedly have had remarkable success in their literacy programs. A third program is run through the Youth Health Clinic in Elkin, West Virginia, which caters its services to teenage parents. The clinic has had sufficient foresight to realize that illiteracy -- often exacerbated by the pregnant teen's dropping out of school -- is prevalent among its patients, and regularly incorporates literacy training as part of its overall health program. The fourth Western-sponsored program is a grant to Laubach Literacy, the largest volunteer training operation in the country.(48)

New York Life, a Manhattan-based insurance firm, supports the Literacy Volunteers of America - New York City (LVA-NYC) with LVA-NYC's largest single annual donation: $15,000. The company also actively solicits other Manhattan companies to finance LVA-NYC. Further, New York Life directly supports the literacy students taught within its walls through award ceremonies and dinners.(49)

Other New York companies such as Citibank, AT&T and the Gannett Foundation all make financial contributions to community-based and volunteer literacy education organizations.

Provision of Tutors and Meeting Facilities

One of the most common in-kind contributions private companies make to local literacy efforts is to allow literacy classes to be held in corporate meeting rooms. Several New York companies, including Gulf and Western, J.C.Penney and New York Life open their doors two or three nights each week for literacy education classes.(50)

Additionally, some companies have encouraged current employees to assist personally in literacy training efforts. New York Life recruited tutors within the firm to assist LVA-NYC in its efforts. To date, New York Life tutors have devoted a total of approximately 14,000 manhours to training illiterate adults to read. Because of the intense commitment of time being provided by in-house tutors, and because the firm recently has expanded the availability of its facilities to three nights each week, New York Life began to recruit additional tutors from other places in the community.(51)

J.C.Penney also provides LVA-NYC with volunteer teaching staff.(52)

Still, however, what most illiterate adults acquire through corporate-sponsored education is limited to training that allows them only to function more effectively in areas specific to the profits of the corporation. According to Kozol, "[o]nly one percent of all funds spent for training of employees by American corporations has gone to basic math and reading/writing skills as opposed to skills required to perform a narrow task."(53)

Provision of Information on Illiteracy

Harold W. McGraw, Jr., the chairman of the McGraw-Hill corporation, an internationally known publisher of books and other reading material, has launched an intense effort to make private businesses aware of their stake in teaching illiterate adults how to read. This effort, spearheaded by the Business Council for Effective Literacy (BCEL), circulates newsletters free of charge to the business and literacy education communities across the nation. Other publications, such as technical newsletters on how to develop effective basic skills programs in a corporation, are also available through the BCEL.

In December 1985, the American Broadcasting Corporation (ABC) and the Public Broadcasting System (PBS) announced a joint, nationwide effort to alert the country to the tremendous problems of adult illiteracy. In 1986, ABC and its 216 affiliated stations and PBS and its 313 member stations began working in their communities to help mobilize resources to deal with illiteracy locally, an effort labled "PLUS" (Project Literacy U.S.). Leaders in business, labor, education, government and religion were encouraged to create or expand task forces, introduce literacy hotlines, and provide the facilities and personnel that increased demand for literacy services would require.

Reportedly, PLUS has had a measurable success on the dedication of attention and resources to combatting adult illiteracy in the country. According to a PLUS newsletter:

- 326 local PLUS task forces have been established in the 50 states, the District of Columbia and Canada, with strong local PBS station and ABC affiliate participation.

- PLUS has inspired extensive national and local radio and television programming on the subject of adult illiteracy and scores of local public service campaigns.

- PLUS accounted for a substantial rise in public awareness of the problem of adult illiteracy. Over 71 percent of the respondents to a poll commissioned by ABC were aware of the national illiteracy problem, up from 40 percent before PLUS programming premiered.(54)

Other information services also were developed in the State. In 1983, the State and New York City established the Literacy Assistance Center in New York City to provide technical assistance on literacy education practices to community-based not-for-profit organizations. In 1984, Municipal Assistance Corporation (MAC) funds were provided to the Literacy Assistance Center. The MAC funds allowed the Center to provide not only increased technical assistance, but support services, data collection services, and a referral hotline to the community.

The Center prints and distributes a quarterly newsletter highlighting recent State and federal activities in literacy education. A monthly calendar is also published that lists specific events, funding sources and employment opportunities for people in the literacy education field. Additionally, the Center holds forums and conducts studies on to adult illiteracy.

Volunteer Organizations

Two volunteer literacy organizations, Laubauch Literacy and

Literacy Volunteers of America -- both headquartered in Syracuse, New York -- are the most active volunteer adult literacy efforts in the country today. Laubauch Literacy, although very limited in its New York State activity, employs over 40,000 individuals nationally who actively train illiterate adults to read and write. Laubauch programs reach approximately 50,000 adults nationwide each year.(55) Literacy Volunteers of America (LVA) is the second largest volunteer effort in the nation and the largest volunteer network operating in New York State. LVA has an estimated 48 branches in New York State alone, employing about 4,900 people.(56) Together, these two efforts educated an estimated 5,200 New Yorkers in the past year.(57)

## VII. WHAT WORKS?

A rational approach to reducing the number of illiterate adults in the State is to establish effective literacy education programs in both the public and private sectors. One problem, however, is determining exactly what types of programs work and what types do not work.

Without solid information on what types of literacy education programs will achieve the best results -- or even which will achieve satisfactory results -- the State and private businesses could end up pouring enormous sums of money into programs that will continue to educate only a minimal fraction of the illiterate population and that will likely never reach those most in need of training.

Discussed below are two major original studies on effective adult literacy training programs and a recent project financed by the State Education Department that provides an overview of the academic literature on this subject.

### THE FAR WEST LABORATORY STUDY

In 1985, the Far West Laboratory for Educational Research and Development, an independent consulting firm participating in the federally-initiated National Adult Literacy Project, published the most comprehensive assessment of effective literacy programs to date.(58) The study, funded through a grant by the National Institute of Education, is viewed as one of the foremost empirical research projects on the affective aspects of adult

literacy initiatives.

The Far West study analyzed data from over 400 highly-rated adult literacy programs across the country, and examined in detail 15 programs determined to be exceptional. The sample programs included a varied and representative selection of educational efforts, such as community-based organizations, library-operated initiatives, and job skills development programs. At each of the sample sites, students, teachers and administrators were interviewed in an attempt to determine the support systems and teacher behavior patterns that characterized these effective literacy education programs.

The sampled programs fell into three basic categories based on the programs' goals for its students: academic or job-skills success; human development success, with the accomplishment of personal goals; and the achievement of social and political mobility through literacy. While none of these categories is mutually exclusive, most literacy programs are established with one of these three goals in mind for its students.

Presented below are the study's findings of specific characteristics of successful literacy training programs.

Counseling

One of the support systems most prevalent in each of the literacy education programs examined by the Far West research staff was a comprehensive system of structured counseling. In each of the three types of literacy programs, the teacher was the focus of all counseling efforts, even though the actual content

of counseling sessions varied with the type of program.

According the the Far West study, "[t]he academic and job-skills-oriented programs took a 'you-can-do-it' approach to counseling. Morale boosting and 'cheerleading' were frequent."(59) Because of the specific goals of these programs, however, counseling was precisely focused and took the form of specifying expectations of the students, outlining goals and conveying rules.

Literacy programs that stress human development skills are much more sensitive to students' economic and cultural history, and base counseling support on personal problems and needs. The Far West study noted that the vast majority of students enrolled in literacy programs bring with them "a history of problems with academia and needs that [have] not been fulfilled."(60) Teachers in these programs let students define their literacy needs -- such as getting a driver's license or applying for citizenship -- and apply counseling when necessary to help their students attain these goals.

Counseling in both the academic/job-skills achievement and the human development programs take place in a one-on-one environment, with consistent individual attention to students' needs. However, for the sample programs examined in the Far West study that focused on social advancement, one-on-one counseling took place far less often than counseling in a group format. For these programs, the study states: "Counseling and teaching [become] interwoven, as students' concerns [are] discussed in class and tutoring sessions and students [are] encouraged to

name, analyze and develop strategies for dealing with their own problems. At the same time, these issues or concerns [become] the raw materials for learning -- the basis on which reading, writing, computing and thinking skills [are] developed."(61)

An interesting and important finding in the Far West study is that a crucial counseling skill in all the sampled programs is "the ability to put students in touch with needed services that the program could not provide."(62)

Peer Support

A second type of support system prevalent in the exceptional literacy education programs studied by the Far West Laboratory is peer support, where students offer each other both personal and academic assistance. The study states: "While . . . peer support [is] only occasionally deliberately planned, and more often encouraged after it happened spontaneously, the fact that its existence characterizes almost all the exemplary programs studied suggests that it is an important factor in these programs' success."(63)

More often than not, opportunities for peer support activities are provided to the students rather than instituting a formal arrangement for interaction. These "opportunities" often take the form of encouraging students to work together on their own even in the instances of one-on-one tutoring by literacy instructors. For the programs that formalized peer support activities, group instruction was used at least part of the time to meet students' need for social support, the study

noted.(64) Formal, one-on-one peer support structures -- the "buddy system" -- generally matched both tutors and other students with a student of similar economic and cultural backgrounds.

Auxiliary Support Services

In the Far West study, child care services were the most frequently cited auxiliary support service in the sample programs. Administrators of these programs said that child care was not only "critical for logistical reasons," enabling mothers to enroll in literacy programs, but also helped assuage fears that the program would "inflict hardships or force the family to make any unnecessary changes."(65)

Other auxiliary support services offered by some of the programs in the Far West study included transportation, food, housing assistance, and the provision of clothing for job interviews.

Teacher Behavior

Unquestionably, the most significant finding in the Far West study of effective literacy education programs is that "teachers who attend to their students' emotional...needs at the same time that they provide instruction are...a key element in literacy training."(66)

Tutors that are sympathetic to students' economic and cultural background not only teach their students, but help them admit to and cope with various social problems they might

have.(67) The study found that "regardless of program philosophy or goal, the teacher's attitude of respect for the learner and the learner's background and life experiences, seemed to be the factor most commonly cited by program directors, staff and students as critical to outstanding literacy programs."(68)

## THE BUSINESS COUNCIL FOR EFFECTIVE LITERACY

The Business Council for Effective Literacy (BCEL) provides technical assistance to businesses that wsih to establish literacy education programs for their workers. In a recent publication entitled Job-Related Basic Skills: A Guide for Planners of Employee Programs, the BCEL offers "a step-by-step guide to planning and implementing an effective job-related employee basic skills program." (69)

The BCEL report presents 12 steps any business should take to ensure the success of in-house literacy education programs. These recommendations, which solely focus on job skills development through increased literacy, are based on independent research and on the experience to date of several private companies that have established effective literacy training programs. Presented below is a summary of some of BCEL's recommendations for designing an effective program.

1. Assess the company's need for literacy training and its available resources.

The minimum skill requirements for each job must be analyzed. This will allow the company to precisely determine where training programs are necessary to boost the literacy/skill level of workers doing particular jobs. Company time, effort and

resources thus will be used in the most productive manner.

2. Create a coordinated planning team.

BCEL has recognized the need for coordination of in-house educational programs as well as for input on program design from a wide range of company personnel. The report recommends that training and human resources personnel be included with department heads and union officials in planning literacy/skill development programs.

3. Choose an appropriate partner.

Because most companies do not have sufficient resources or expertise to develop and run their own educational programs, businesses should contract with a local organization specializing in literacy training and skills development. School districts, volunteer literacy organizations, technical assistance groups, and private industry councils each can provide a company with both hands-on assistance and vital information on what type of program will work and what type will not.

4. Select the appropriate teaching approach, curriculum and materials.

BCEL states: "To achieve the best learning and job-performance results, five basic principles should be at the center of this effort:

- Employees' prior knowledge about a job content area should be acknowledged and built on;
- Materials actually used in specific jobs should be used extensively as instructional resources;
- Trainees should spend time actually reading and writing about the job content area they are studying;
- Teachers should be creative about how they present information about a content area; and

- Reading strategies should be taught that are appropriate to varied on-the-job reading tasks.(70)

5. Properly recruit prospective tutors.

The report emphasizes that the most important aspect of recruiting prospective tutors is that the selected individuals maintain sensitivity to and respect for the economic and cultural position of trainees. In a similar vein, the report recommends that records on schooling performance and achievement should be kept strictly confidential.

6. Keep accurate records.

Simply put, to ensure good program management and accurate program evaluation, a system must be established to collect and analyze basic information on areas such as attendance, test scores, and hours of instruction dedicated to literacy training.

7. Evaluate the program periodically.

A comprehensive schedule of evaluation will not only demonstrate the program's effectiveness, but will highlight aspects of the literacy skills program that need refinement.

NEW YORK STATE STUDY

A report commissioned by the State Education Department, Essential Characteristics of Effective Literacy Programs, written by Miriam Balmuth of Hunter College, attempted to gather background information on the attributes of successful training programs.(71)

The report provides a useful overview of the current research on effective aspects of adult literacy training

initiatives. Not surprisingly, the report also reveals inconsistent findings among the countless studies and leaves information gaps on many major components of adult literacy programs.

Overall, however, the report would have better served its stated purpose of being used as "a guide for Adult Basic Education program planning and development" had the author provided more analysis of pertinent studies in addition to the exhaustive excerpts taken from existing research reports. The reader, who in many cases is involved in operating literacy training programs, is not provided with sufficient guidance to wade through the many conflicting suggestions for program design.

In a few cases the author provides some guidance. For example: support services are portrayed as essential; the study recommends that the level of the student's reading ability be determined to offer appropriate instruction; instructional methods should be structured and clearly spelled-out; and tutors should be sensitive to the students' cultural and economic status, and should retain high morale throughout the training process.

More frequently, sections of the report simply provide conflicting excerpts of other research with no summary conclusions nor statements of the relative strengths and weaknesses of the cited studies. For example: there is no determination of whether personal or non-personal recruitment of potential trainees is most effective; individual literacy training organizations are left to decide for themselves in the

absence of any guidance the most appropriate time to schedule training sessions; and there is no conclusion presented on when to institute one-on-one tutoring and when it is preferable to establish group instruction.

## IMPLICATIONS

The research and findings of the Far West Laboratory and BCEL studies have concrete implications for the design of State and private sector literacy education programs.

First, the Far West study emphasized that institutional settings with school-like atmospheres are not efficient environments for literacy education. Lecture hall approaches to literacy training often remind illiterate adults of past failures and prevalent presumptions of incompetence. Further, these settings lack the necessary attention to the emotional and social needs and concerns of the individual.

Second, to be effective a literacy program must incorporate a comprehensive structure of support services. Counseling and peer support help address the preconceived social and cultural biases students hold against the educational environment, others in society, and even themselves. Auxiliary support services such as child care and transportation assistance alleviate some of the most pressing economic concerns literacy students encounter -- concerns significant enough to keep illiterate adults from enrolling in educational programs.

Third, one of the most crucial aspects of effective literacy programs in either the public or private sector is the approach

and attitude of the tutors. Sensitivity to the students' economic and cultural background, and to established predispositions to formal education, is required for effective instruction. The ability of tutors to recognize and address a student's concern is vital in opening his mind to literacy education.

And fourth, a structure of planning, preparation, and evaluation of literacy programs should be common to both public and private efforts and should include: (1) assessment of the need for literacy education; (2) coordination of the involved agencies, organizations and personnel in planning and establishing a literacy training program; (3) recruiting tutors who show not only a desire to teach but who are sympathetic to the basic needs of illiterate adults; and (4) maintainence of accurate and complete data on the incidence of illiteracy, enrollees in educational programs, and the performance of trainees.

## VIII. A PLAN OF ACTION

This report has illustrated the devastating impact adult illiteracy has had on the people of New York State. It also has shown that current public efforts to combat the problems of illiteracy are not a sufficient remedy. Because the private sector has a substantial stake in maintaining a literate workforce, it now must enact an aggressive plan of action to help eradicate adult illiteracy in the State. And to foster such private sector activity, the State must play a comprehensive supportive and coordinating role for all literacy education efforts throughout New York.

RECOMMENDATION 1: The State should adopt a comprehensive strategy for allocating existing and future adult literacy education funds. All adult literacy appropriations should be targeted on a first priority basis to training those individuals determined to be functionally illiterate. The New York State Education Department also should adopt guidelines allowing funding of only those literacy training programs that meet certain broad criteria for effective instruction methods.

Using the State Education Department's own definintions, 64 percent of all enrollees in literacy education programs in 1986 were not illiterate. Even under the Commission's definitions of functional illiteracy, 27 percent of all enrollees in State-funded basic education programs were literate.

The State must use its limited resources wisely. Literacy education funds should be spent on a first priority basis on those individuals determined to be functionally illiterate.

These are the adults most in need of immediate and comprehensive educational assistance.

To further assure that taxpayers' money is being spent efficiently and effectively, the State Education Department should adopt guidelines limiting State financial assistance to those literacy education programs that meet certain broad criteria of success. These critera could include: unconventional educational environments designed to promote individualized instruction; a system of support services available to enrollees; a comprehensive screening and selection process for potential tutors; a systematic plan of coordination with other literacy efforts; and requirement for comprehensive data collection.

RECOMMENDATION 2: The New York State Education Department should better coordinate current public and private literacy efforts. A directory of literacy services currently available through private companies, volunteer organizations and the New York State and federal governments should be published periodically and widely circulated.

Some of the literacy education programs operating throughout the State have been noted in this report. However, there is no comprehensive directory of services, both public and private, to which companies and other institutions can refer when trying to coordinate education of their employees, specifically, or the adult population, generally.

The New York State Education Department compiles a list of the volunteer programs that receive State funds. This list should be drastically expanded, to include those volunteer

efforts not receiving State funds, literacy training programs offered by private employers, and State contact points, such as the State-organized regional task forces.

Companies that initiate a literacy education program for their own workforce should apprise the State Education Department of the qualifications for and benefits of such a program. The same should be true for volunteer organizations operating in the State, with particular emphasis on the location and populations served by those organizations.(72) The Education Department should then compile this information, combine it with data on State and federal programs currently in operation, and publish a final document as a directory of existing literacy services. The document should then be circulated to major corporations and public institutions throughout the State.

General knowledge by private corporations and organizations of existing training services would directly benefit illiterate adults in several ways:

-- Volunteer literacy educators could "graduate" students into jobs with a local company that has an established continuing literacy program. The individual thus would not be thrown into the work-a-day world with no options for continuing assistance.

-- Companies could make full use of existing resources when training its individual workforce. While a smaller business may not have the resources to initiate an education program, instead of excluding illiterate adults from continued employment or new employment, the company could refer individuals to volunteer organizations and State programs operating in the area listed in the directory.

-- Teachers, religious leaders, and other civic officials could both see the strengths and address the weaknesses of literacy training efforts in a given region.

Coordination of current literacy training services also will eliminate the unnecessary duplication of efforts, and will likely stimulate new programs in areas of the State where the existing illiterate population is not adequately served.

RECCOMMENDATION 3: Restructure and improve the effectiveness of existing regional literacy councils, with particular attention to private sector literacy training initatives. Representatives of businesses in specified regions should meet with directors of area volunteer literacy programs to discuss current efforts, needs, and proposals for action.

The New York State Education Department recently established a regional network in an attempt to coordinate State-run literacy efforts with volunteer programs operating in a given area of the State. The State, however, plays no active role in these councils. Viewed as purely private sector coordinating bodies, the State forfeits even a presence at the meetings. No supervision, no instruction, nor any briefing on State-funded programs is provided to participants of the regional literacy councils.

Although volunteer organizations participate in these coordination efforts quite vigorously, the information on their activities that is required by the State Education Department consists only of summary statistics filed on a standardized form. Also, there is no concerted attempt made to include business-initiated programs or concepts as part of this regional network.

The establishment of effective regional councils with a particular emphasis on private sector initiatives would provide a forum at which business leaders and other concerned private entrepreneurs could discuss the status of adult illiteracy in their neighborhoods.

Such councils would coordinate the battle against adult illiteracy, and would help compile information necessary for research and for reporting to the State Education Department. The establishment of these literacy education "think tanks" would pull together the best innovations in the field today, and would provide an effective method through which specific needs will be quickly and effectively addressed.

The regional councils proposed here would allow volunteer organizations to assist corporations (and vice versa) in the hands-on establishment of private, goal-oriented literacy training programs targeted to a precise population. By design, these councils should not duplicate the State's efforts, but rather supplement them.

RECOMMENDATION 4: New York State should finance a study of the long-term effects of literacy training on illiterate adults.

The long-term effects of training illiterate adults to read and write are not fully known. New York State should finance a study to determine the extended benefits to the trained individual -- through sustained employment, growth in wages, improved standards of living, and higher self esteem -- and to

society.

The Literacy Assistance Center, in New York City, has undertaken such an effort in conjuction with the Center for Literacy (CFL), a not-for-profit volunteer literacy agency in Philadelphia. The study, performed on enrollees in CFL's programs, assesses the success of the programs over time by looking not only at the acquired technical skills of literacy students but also at the usefulness of this training in other aspects of adult life.(73)

A similar study should be undertaken for a broad range of literacy education programs in New York State. Because of its involvement with the CFL study, the Literacy Assistance Center could provide an invaluable perspective on designing and implementing such a study.

RECOMMENDATION 5: The New York State Education Department should improve its data resources on the characteristics of illiterate adults and on literacy training services offered in the State.

Literacy training programs can be effectively targeted only if reliable data is available that show where services are most needed. More accurate tracking of State spending on literacy programs is necessary to allow proper quantification of benefits associated with specific costs.

The ability to derive demographic outlines of illiterate individuals holds the prospect of preventing illiteracy through early education efforts and a more proper and focused effort to

combat illiteracy in adults. If more accurate target populations can be determined, more effective solutions to illiteracy can be designed.

RECOMMENDATION 6: New York State businesses should be encouraged to to play a more active role in addressing the problems of adult illiteracy.

In-House Literacy Training

The New York State Education Department and Department of Labor should actively encourage New York businesses to establish basic adult literacy programs. The agreements reached between General Motors and Ford and the UAW are examples of effective programs.

Educational programs should be offered at the workplace, and should be scheduled in coordination with regular work shifts. This method of timing would allow a worker to enroll in the necessary education programs while not drastically disrupting his daily schedule. Often, low enrollment in training programs by illiterate adults is not due to their lack of interest in learning, but instead is due to an ignorance about existing services or conflicts with schedules of the individuals' daily lives.

Herbert Gintis, a professor of economics of education at the University of Massachusetts, writes in his article "The Political Economy of Literacy Training":

> Often the most effective means of implementing literacy

> training and other forms of adult cognitive and occupational training is to integrate such programmes into work-life and community-life. . . . Provision should be made [in conjunction with] the work day for literacy training as part of the worker's job benefits. In addition, employers should be urged to recognize the division of labour so as to draw upon the literacy skills of workers as these skills manifest themselves and develop, even in situations where the immediate pay-off in higher productivity is not evident. For the long-run benefits to society (and usually to productivity within the industry itself) of such programmes are significant.(74)

Because any job is generally the focus of one's life, and requires the greatest individual time commitment, a literacy training program established around, but still associated with working hours, will be the most successful.

In-Kind Contributions

Businesses should be encouraged to provide space, supplies, and tutors to neighborhood literacy education programs. Because of the usually restrictive finances of volunteer organizations, and because of the private sector's stake in addressing adult illiteracy, companies must be willing to dedicate a portion of their resources to combatting this problem. Benefits, such as full pay for employees willing to volunteer as literacy tutors in a neighborhood organization, should be actively encouraged.

Also, to the extent possible, companies should offer "open" classrooms where non-employees could participate in corporate-sponsored literacy education. Such a program would provide yet another opportunity available on a neighborhood level to illiterate adults.

RECOMMENDATION 7: In addition to coordinating literacy programs throughout the State, the public sector should play an active and supportive role in private sector initiatives. The State should: (1) finance ongoing research on the effectiveness of various approaches to literacy training; (2) disseminate information on the occurance of illiteracy throughout the State; and (3) fund literacy programs for target populations, such as welfare recipients and prison inmates that are not reached by private sector efforts.

Further study is needed both on which programs currently operating in the State are doing so effectively and on what types of literacy training programs are the best for New York State. The State should fund further studies to determine the best methods of instruction and program designs for effective literacy instruction in the State. As noted in Section VII of this report, the one study undertaken by the State does not provide sufficient guidance to determine the appropriate structure for an effective literacy education program.

To more accurately target resources and efforts, both public and private sector decision-makers must be able to identify a target population. Comprehensive tracking of the incidence of illiteracy and the progress programs are making or where programs are lacking must be made available.

Private sector literacy efforts likely will not reach certain sectors of New York State's population. Public assistance recipients and prison inmates, for example, largely are not part of the available workforce. Thus, the State should finance literacy programs targeted at specific populations such as these to address more fully the wide-ranging problems of adult

illiteracy.

## CONCLUSION

As we move forward in our efforts to eradicate adult illiteracy, we must do so without unrealistic expectations. Even if the Commission's recommendations outlined in this report are adopted, adult illiteracy will not be eliminated. Illiteracy will remain an intractable problem until society as a whole comes to grips with the more fundamental problems of, for example, ineffective public school education, deterioration of the family unit, and high school drop-outs. Not only do we need to train today's adults, we need to ensure adequate education for the adults of tomorrow.

## IX. NOTES

1. Based on data supplied by the New York State Education Department and others. From a sample of participants enrolled in State-run literacy programs, the Education Department estimates that half of the 4,100,000 adults without high school diplomas read at no better than the sixth-grade level. Assuming an even distribution of performance levels through the population of adults without diplomas, an additional 683,000 people read at no better than an eighth-grade level. Additionally, of those adults who do have high school diplomas, an estimated 113,000 individuals can be classified as functionally illiterate (see Setion IV for more detail).

2. New York State Department of Commerce. Extrapolation of data for the total population of adults (16 years or older) in New York State, 1987: 14,083,428. [1985: 13,990,805; 1990: 14,222,361; 1995: 14,453,771]

3. Correspondence from Gordon M. Ambach, Commissioner of the New York State Department of Education, to Senator Roy M. Goodman, dated April 3, 1987.

4. New York State Education Department. Figures represent funding for July 1, 1986 - June 30, 1987. Also, estimated figures for July 1, 1987 - June 30, 1988 are:

| | |
|---|---|
| Employment Preparation Education: | $17.0 million; |
| Equivalency Attendance: | 13.5 million; |
| Welfare Education Program: | 8.0 million. |
| | $38.5 million |

Source: Russell Kratz, New York State Education Department.

5. In 1984, the U.S. Bureau of the Census increased its previous estimates on the number of illiterate adults in the country from approximately 216,000 (0.1 percent of the total population) to 20 million. However, the Bureau still counts only those who lack conventional competence, not those who also are functionally incompetent.

   Professor Jeanne Chall (Director, The Reading Lab, Graduate School of Education, Harvard University) estimates that anywhere from 75 million to 85 million Americans are functionally illiterate, defining functional literacy as the ability to perform up to society's expectations of minimal competence.

6. The New York State Department of Education estimates that, of the 4,100,000 adults who lack a high school diploma, 2,050,000 cannot read above the sixth-grade level. This, simply, is the Department's estimate of the adult illiterate population.

   Others, including Literacy Volunteers of America and Laubauch Literacy, claim that the entire population of

adults without high school degrees, plus one percent of those adults that have diplomas, are in need of literacy training. This pool of adults totals approximately 4,233,000.

7. Jonathan Kozol, Illiterate America (Garden City, New York: Anchor Press/Doubleday, 1985), p.8-9.

8. Carman St.John Hunter and David Harman, Adult Illiteracy in the United States, A report to the Ford Foundation (United States : McGraw-Hill, 1979), p. 7.

9. Ali Hamadache, "Illiteracy in the 'Fourth World'," UNESCO Courier, February 1984.

10. Dr. Norvell Northcutt, University of Texas, Adult Performance Level Program, 1977.

11. Ali Hamadache, "Illiteracy in the 'Fourth World'," UNESCO Courier, February 1984.

12. U.S. Office of Education (currently the U.S. Department of Education), a Request for Proposals for a contract to evaluate tests of functional literacy, in: Northwest Regional Educational Laboratory, Dean H. Nafziger et al, Tests of Functional Adult Literacy: an Evaluation of Currently Available Instruments, 1978, p.20.

13. Ibid.

14. Testimony of Karl Haigler, Director of the Adult Literacy Initiative, United States Department of Education, at the Joint Hearing before the Subcommittee on Elementary, Secondary, and Vocational Education of the Committee on Education and Labor, House of Representatives, and the Subcommittee on Education, Arts and Humanities of the Committee on Labor and Human Resources, Senate, June 12, 1986.

15. Testimony of Judy Koloski, State Director of Adult and Community Education, State of Maryland. "Illiteracy and the Scope of the Problem in this Country," text of the Hearing before the Subcommittee on Postsecondary Education of the Committee on Education and Labor, held in Washington D.C. on September 21, 1982 (Washington D.C.: U.S.Government Printing Office, 1984), p. 79.

16. Garrett Murphy, Director of Adult and Continuing Education, New York State Department of Education. Telephone interview, July 20, 1987.

17. 1970 Census of the Population. "Illiteracy and the Scope of the Problem in this Country," p. 4.

18. Hunter, Adult Illiteracy in the United States, p. 30.

19. For example, Dr. Donald Fisher (University of Michigan) of the National Education Institute claims that at least one percent of all high school graduates cannot read at the ninth-grade level (see Note 26).

20. Kozol, Illiterate America, p. 10.

21. Leslie M. Limage, "Adult Literacy Policy in Industrialized Countries," Comprehensive Education Review, vol.30, no.1, February 1986; and Marsha Levine, ed., The Private Sector in the Public School, "A Conceptual Framework."

22. For example, Fields, H., "Education Secretary Disputes Kozol," Publisher's Weekly, January 10, 1986; and Fred M. Hechinger, "What Illiteracy Isn't," New York Times, June 2, 1987.

23. For example, Hunter, Adult Illiteracy in the United States; and Duggan, Paula, "Literacy at Work," Washington Public Policy Notes, September 1986.

24. Garrett Murphy, Director of Adult and Continuing Education, New York State Department of Education, May 20, 1987.

25. For example, 16 percent of the White population is illiterate, while 44 percent of the Black and 56 perecnt of the Hispanic populations are illiterate.[Kozol, p.4; U.S.News and World Report, "AHEAD: A Nation of Illiterates?", May 17, 1982; and "A Target Population in Adult Education," the National Advisory Council on Adult Education (Washington D.C.: NACAE, 1974)] However, the breakdown of enrollees in literacy training programs is: 38 percent White, 26 percent Black, and 26 percent Hispanic. [New York State Education Department, "Review of State-Level Literacy Activities"]

26. Dr. Donald Fisher (University of Michigan) of the National Institute of Education estimates that at least one percent of all high school graduates in the country read at no better that the eighth-grade level. The one-percent estimate is applied to New York State high school graduates to determine the number of illiterate adults in that population.

27. The first adjustment is made, assuming an even distribution of reading and writing skills across the population of non-high school graduates, by adding two-twelfths of this population (683,000) to SED's 2,050,000 figure. The second adjustment is made under the assumption that 1 percent of all high school graduates (113,000) cannot read at the ninth-grade level (see Note 26).

28. As stated, conventional illiteracy is defined here as fifth-grade reading level and below, and functional literacy is defined as the ability to read above the eighth-grade level. The figures presented are based on the assumption of an even distribution of individuals across performance levels.

29. New York State Department of Commerce, Official Population Projections for New York State Counties. Estimation of 1987 adult population: Buffalo SMSA (Erie and Niagara counties) -- 956,286; Rochester SMSA (Livingston, Monroe, Ontario, Orleans and Wayne counties) -- 780,769; Syracuse SMSA (Madison, Onondaga and Oswego counties -- 502,321; Albany-Schenectady-Troy SMSA (Albany, Montgomery, Rensselaer, Saratoga and Schenectady counties): 639,230.

30. The U.S. Department of Education estimates that the total national illiterate adult population will grow by 8.5 percent annually ("Illiteracy and the Scope of the Problem in this Country," testimony before the Subcommittee on Postsecondary Education, September 21, 1982). Based on U.S.Bureau of the Census and New York State Department of Commerce estimates, the population of the nation will rise by 4.3 percent from 1987 to 1992, while New York's population will increase by only 1.5 percent. Because of the differences in total population growth, it is inappropriate to apply the 8.5 percent national growth rate for the illiterate adult population in New York State. In the numbers presented, adjustment is made for these differences in population growth rates.

    Because New York State's minority population will increase by a greater proportion than in the country as a whole (10.1 percent versus 8.4 percent), it is assumed that a second, upward adjustment should be made to reflect the incidence of illiteracy in minority populations (see Note 25).

    It is estimated that the population of illiterate adults in New York State will grow by 3.1 percent annually. The numbers presented assume that 0.25 percent of all illiterate adults will become literate each year due to State-funded literacy education programs.

31. "[The term functional illiteracy] is, in itself, a function of the needs imposed upon a person by the economic and social order....It is the rate of change [of the economy], and the degree to which it may outpace the literacy level of the nation, that determine what part of the nation is unable to survive and prevail within the context of its times." Kozol, p. 57.

32. Press release by New York State Senator Roy M. Goodman, March 26, 1984.

33. New York State Education Law, §3602 (McKinney's, 1985 and

Supplement 1987).

34. From Andrew O'Rourke, "Literacy and Employment," Position Paper #11, September 3, 1986; and "Review of State-Level Literacy Activities," New York State Education Department.

35. Leslie M. Limage, "Adult Literacy Policy in Industrialized Countries," Comprehensive Education Review, vol.30, no.1, February 1986, p. 67.

36. Russell Kratz, Chief of the Bureau of Adult and Continuing Education Program Development, New York State Department of Education.

37. Ibid.

38. New York State Education Department, "Literacy Education for Out of School Youths and Adults in New York State," p.8-9.

39. "AHEAD : A Nation of Illiterates?", U.S. News and World Report, May 17, 1982.

40. Adult Literacy Education Program, New York State: Participant Data 1984-85, The University of the State of New York, State Education Department, Bureau of Curriculum Development and the Division of Adult and Continuing Education Programs, Albany, N.Y., 1986; and "Review of State-Level Literacy Activities," New York State Education Department, for example.

41. Adult Literacy Education Program, New York State: Participant Data 1984-85, The University of the State of New York, State Education Department, Bureau of Curriculum Development and the Division of Adult and Continuing Education Programs, Albany, N.Y., 1986, p.15.

42. New York State Education Department, "Literacy Education for Out of School Youths and Adults in New York State," p. 7-8.

43. Irwin Ross, "Corporations Take Aim at Illiteracy," Fortune, September 29, 1986, p. 48.

44. Barbara Vobejda, "Before They Can Learn Robotics, They Have to Learn the Three R's," The Washington Post National Weekly Edition, April 20, 1987, p. 36.

45. Marsha Levine, ed., The Private Sector in the Public School, "A Conceptual Framework," p. 14.

46. New York State Education Department, "Literacy Education for Out of School Youths and Adults in New York State," and Irwin Ross, "Corporations Take Aim at Illiteracy," Fortune,

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47. Teamsters, Joint Council 16; United Auto Workers, District 65; AFSCME, District Council 1707; International Ladies Garment Workers Union; Amalgamated Clothing and Textile Workers Union; Hotel and Restaurant Workers Union; United Auto Workers, Local 259. Literacy programs for the consortium are overseen by Local 237 of the Teamsters Union. New York State Education Department, "Review of State-Level Literacy Activities."

48. Edward Weaver, President, Western Foundation, Gulf and Western Corp. Telephone interview, July 20, 1987.

49. Carol Reuter, New York Life. Telephone interview, July 20, 1987.

50. Telephone interviews with Edward Weaver (Note 48), Carol Reuter (Note 49) and Robin Morrisson, J.C.Penney, July 20, 1987.

51. Carol Reuter, New York Life. Telephone interview, July 20, 1987.

52. Telephone interview with Robin Morrisson, J.C.Penney, July 20, 1987. J.C.Penney has announced its intentions to leave New York City and relocate its corporate headquarters in Plano, Texas, by the end of 1988.

53. Kozol, p. 42.

54. "The PLUS Success," Project Literacy U.S. newsletter, Capital Cities/ABC, Inc., and the Public Broadcasting System.

55. Leslie J. Limage, "Adult Literacy Policy in Industrialized Countries," Comparative Education Review, February 1986, p. 67.

56. Paul Grondahl, "Opening a World of Books," Albany Times-Union, May 3, 1987. Literacy Volunteers of America employs over 40,000 volunteers across the nation.

57. Information provided by New York State Education Department and Literacy Volunteers of New York State through Russell Kratz, Chief of the Bureau of Adult and Continuing Education Program Development, State Education Department, July 22, 1987.

58. Kathleen J. Phillips and Donna Bellorado, Jane A. Margold (ed.), Affective Aspects of Adult Literacy Programs: A Look at the Types of Support Systems, Teacher Behavior and Materials that Characterize Effective Literacy Programs, Far West Laboratory for Research and Development and the

Network for Innovative Schools, sponsored by the National Institute for Education, 1985.

59. Ibid., p.10.

60. Ibid., p.11.

61. Ibid., p.13

62. Ibid., p.10.

63. Ibid., p.14.

64. Ibid., p.15.

65. Ibid., p.17.

66. Ibid., p.19

67. "The qualities that these people have that make them good tutors are patience, compassion, and enjoyment of reading. They are trained to tutor adults and to understand the special problems adults have as nonreaders and as reading students. Proper tutor training combined with patient, compassionate tutors who have support services from a central office are necessary ingredients for a successful program." Marjorie Greenburg, Executive Director of Literacy Volunteers of Broome/Tioga County, cited in "Literacy and Employment," Position Paper #11, by Andrew O'Rourke, September 3, 1986.

68. Kathleen J. Phillips and Donna Bellorado, Jane A. Margold (ed.), Affective Aspects of Adult Literacy Programs: A Look at the Types of Support Systems, Teacher Behavior and Materials that Characterize Effective Literacy Programs, p.27.

69. Business Council for Effective Literacy, Adult Literacy: Programs, Planning, Issues (quarterly newsletter), July 1987.

70. Ibid.

71. Miriam Balmuth, for the State Education Department, Essential Characteristics of Effective Literacy Programs: A Review and Analysis of the Research, reprinted February 1987.

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